Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

TITLE V DRAFT PERMIT NO. V-05-004
CARMEUSE LIME & STONE, INC MAYSVILLE OPERATION
PENDLETON, KENTUCKY.
DECEMBER 22, 2004
ROBERT L. WILLIAMS, REVIEWER
PLANT I.D. # 21-161-00010
APPLICATION LOG # 50249
AI # 3003

SOURCE DESCRIPTION:

Carmeuse Lime & Stone, Inc (formerly known as Dravo Lime, Inc) Maysville Operation in Maysville, Kentucky is a lime manufacturing facility. They also ship limestone that is too small to be calcined in the kilns.

They are currently operating under:

Permit O-84-029 (Amended), signed December 26, 1990, which covers their limestone operation, coal operation, Kilns #1, #2, and #3, with their existing lime processing, and the haul road and yard area;

Permit C-93-024 (Revised), signed October 4, 1995, which is a PSD permit covering construction of Kilns #4 and #5 (which was not constructed) and additions to the lime processing; and

Permit F-99-015, signed October 9, 2000, which is a PSD permit covering the operating of Kilns #4 and #5 (which was not constructed). The additions to the lime processing were not addressed in this permit.

COMMENTS:

TYPE OF CONTROL AND EFFICIENCY

The particulate emissions from the conveyors are controlled by water spray (control efficiency of 90%), moist material (control efficiency of 90%), enclosures (control efficiency of 90%) and/or baghouses (control efficiency of 98.0 for the limestone drum dryer, otherwise 99.9%). The application submitted to the Division listed "water spray" as control equipment for the majority of the limestone conveyor process, but the permittee requested this be changed during the permit writing process to "moist material". If any of the controls listed by the company in the application prove to be inadequate to meet the emission requirements listed in the permit, the Division reserves the right to require another form of "control equipment" be utilized to meet the permit requirements.

The CO, NO_x, and SO_2 have no controls assigned to them.

COMMENTS: (CONTINUED)

TYPE OF CONTROL AND EFFICIENCY (CONTINUED)

The emissions from haul roads (paved and unpaved) are controlled by a wet suppression method (water truck). The paved haul roads have a control efficiency of 90%, while the unpaved haul roads have a control efficiency of 70%.

EMISSION FACTORS AND THEIR SOURCE

AP-42, Chapter 11.17, Lime Manufacturing, was used for the lime processing.

Emission Factors for limestone and coal are the standard factors used for those industries in the State of Kentucky by the Division for Air Quality's Minerals Section.

APPLICABLE REGULATIONS

The Limestone Handling is governed by **401 KAR 60:670**, New nonmetallic mineral processing plants (40 CFR 60, Subpart OOO as modified by Section 3 of 401 KAR 60:670), **401 KAR 59:010**, New process operations, and **401 KAR 63:010**, Fugitive emissions. The drum dryer associated with the limestone operation is governed by **401 KAR 59:015**, New indirect heat exchangers.

The Coal Handling is governed by **401 KAR 60:005**, Standards of performance for new stationary sources, which incorporates by reference 40 CFR 60.250 (40 CFR 60, Subpart Y), and **401 KAR 63:010**, Fugitive emissions.

Kilns #1, #2, and #3 are governed by **401 KAR 59:010**, New process operations, since they were constructed in 1976.

Kiln #4 is governed by **401 KAR 60:005**, Standards of performance for new stationary sources, which incorporates by reference 40 CFR 60.340 (40 CFR 60, Subpart HH), and **401 KAR 51:017**, Prevention of significant deterioration of air quality.

The Lime Handling is governed by **401 KAR 59:010**, New process operations; **401 KAR 63:010**, Fugitive emissions; and **401 KAR 51:017**, Prevention of significant deterioration of air quality.

Emissions coming from the barge, trucks, and railcars will be considered fugitive and are therefore governed by **401 KAR 63:010**, Fugitive emissions. The baghouse controls listed in the permit for the associated loadouts end at the accordion chutes or spout.

A new NESHAP (MACT) Standard was signed on August 25, 2003 (**40 CFR 63, Subpart AAAAA**) with the Final Rule published in the Federal Register on January 5, 2004 that will apply to Carmeuse Lime & Stone, Inc. Carmeuse will have three (3) years from the date of publication of the Final Rule in the Federal Registar to comply with the new standard, which establishes PM emission and opacity limits for lime kilns, coolers, and processed stone handling (PSH) operations with control devices (stacks / wet scrubbers) or enclosed in a building.

COMMENTS: (CONTINUED)

PROPOSALS:

Carmeuse submitted an application for a name change on September 30, 2002, changing their name from Dravo Lime Company to Carmeuse Lime and Stone, Incorporated. The source name will change from Dravo Lime Company – Maysville Division to Carmeuse Lime and Stone, Incorporated, Maysville Operation. This request has been included in their Title V permit.

Carmeuse applied for a permit to construct and operate a temporary limestone conveying system due to the unexpected catastrophic failure of the existing conveying system on November 21, 2003. They were given permission for this temporary system and submitted an application on April 28, 2004 for the permanent replacement of the failed conveyor system. This addition is included in their Title V permit.

Carmeuse submitted an application for a modification to their existing wash plant, to include an increase in the process rate of the equipment associated with the wash plant, on December 5, 2003. This addition is included in their Title V permit.

Carmeuse submitted an application on December 5, 2003, for the construction of two fuel silos to store solid fuel. These silos will replace the existing open stockpiles. This addition is included in their Title V permit.

EMISSION AND OPERATING CAPS DESCRIPTION:

The source is major in a PSD category with a threshold of 250 tons/year with respect to particulate matter, CO, NOx, and SO2 emissions. The PSD Permits, C-93-024 (Revised) and F-99-015, require:

The coal shall have a minimum average heating value of 12,900 BTU/pound with a maximum average sulfur content of 0.9%. The coal shall also not have a minimum average heating value or greater than average sulfur content than the coal burned during the compliance demonstration and shall not, under any circumstances, have a sulfur content equal to or greater than 1% by weight.

The issue of burning a coal/petcoke blend at Carmeuse's Maysville Operation was addressed by Mr. George Love in a letter dated April 14, 2000. Mr Love states, "The three original kilns have always been capable of burning petcoke. In fact, tests had been conducted to determine if a blend was appropriate from the lime quality standpoint. No modifications whatsoever are, or would be required to accommodate the use of this material". He also states in this same correspondence that "The matter of solid fuel combustion in #4 will require the PSD review and permit modification, as was discussed in the (March 2, 2000) meeting." These issues were addressed by Mr. Dan Gray, PE, Permit Review Branch Manager, on April 25, 2000, to Mr. Love:

EMISSION AND OPERATING CAPS DESCRIPTION: (CONTINUED)

"As you are aware, the Division has received similar requests from some of the electric power generating plants. As part of their Title V permit review and approval process, the

Federal Environmental Protection Agency (EPA) has advised the Kentucky Division for Air Quality that petcoke is an alternative fuel or raw material, and its use therefore, is a change in the method of operation. Whether or not the use of the alternative fuel or raw material would be exempt from being considered a modification depends on whether the source was capable of accommodating its use prior to January 6, 1975. EPA considers the use of petcoke to be exempt only if the source considered the use of petcoke in its design prior to January 6, 1975 and has plans and/or specifications to document the intended use of the petcoke.

Therefore, for the Division to be able to honor your request and allow the use of petcoke by the older three units, the Division requires documentation to demonstrate that the equipment was designed to use the petcoke prior to January 6, 1975. Alternatively, you can provide information to demonstrate that the potential emission increase associated with the proposed modification would not equal or exceed the PSD significant levels."

Therefore, the burning of petcoke or other alternative fuel will not be authorized in Kilns #1, #2, or #3 until the documentation requested in Mr. Gray's letter has been submitted and reviewed by the Division. If the documentation cannot be provided, then a PSD review and request for a permit modification must be submitted to the Division for review before authorization to burn petcoke in Kilns #1, #2, #3 and #4 is approved.

The maximum lime production rate from kiln #4 is 46 tons/hour. The particulate emissions from the kiln shall not exceed 0.60 lb/ton of stone feed [0.41 lb/ton of lime output (0.02 gr/acfm)]. The particulate emissions limit will change by January 5, 2007 (three (3) years from the date of publication of the Final Rule in the Federal Registar) to not greater than 0.12 lb/ton of stone feed to comply with the new operating limits established by Subpart AAAAA of Part 63. The visible emissions discharged into the atmosphere from each kiln shall not exceed 15% opacity when exiting from a dry emission control device. The carbon monoxide, nitrogen oxide, and sulfur dioxide emissions from Kiln #4 shall not exceed 91.667 lbs/hour, 90.292 lbs/hour, and 25.097 lbs/hour, respectfully.

PERIODIC MONITORING:

Due to the product produced at Carmeuse Lime & Stone, Inc Maysville Operation, it is imperative that the monitoring requirements listed in the permit be followed to ensure that any problem resulting from a control or equipment malfunction/failure be minimized as much as possible.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.